

REMARKS

Applicant respectfully requests reconsideration and allowance of the subject application. Claims 7-9, 19-24, 27-29, 55 and 57-63 are pending in the instant Application. Claims 7 and 19 are amended in this Response. Claims 57-63 are added by way of this Response. Claims 7, 19, and 58 are independent claims.

Rejections Under 35 U.S.C. § 103

Claims 7-9 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,216,163 to Bharali et al. (hereinafter "Bharali") in view of U.S. Patent No. 6,161,201 to Payne et al. (hereinafter "Payne"). Claims 19, 21-24, 27-29 and 44 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Bharali in view of U.S. Patent No. 6,005,621 to Linzer. Finally, claim 20 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Bharali and Linzer and further in view of U.S. Patent No. 6,272,148 to Takagi et al. (hereinafter "Takagi"). Applicant respectfully submits that claims 7-9, 19-24, 27-29, 55 and 57-63 are neither taught nor suggested by patents relied upon by the Office, whether taken alone or combination together. Applicant's reasoning for this conclusion is provided below.

The subject application is directed to the use of a single pair of packets for measuring bandwidth over the Internet. Advantageously, the single pair of packets includes non-compressible packets to circumvent packet compression by network components. Compression of packets often changes the size of the compressed packets. Bandwidth may not be correctly measured if packet compression occurs during a bandwidth measuring process. The subject Application describes a process that evaluates if a calculated bandwidth is within a

1 given range of believability related to calculated bandwidth. If a calculated
2 bandwidth is not within the indicated range, a modem and/or operating system
3 may be consulted to determine an appropriate bandwidth value.

4 The foregoing is merely a brief discussion of a portion of the present
5 Application. The discussion is not meant to be limiting of the current claims, nor
6 is the discussion indicative of subject matter Applicant believes is of particular
7 importance.

8 **Claim 7** of the present Application, as amended, recites:

9
10 A method for measuring bandwidth between two entities on a
communications network, the method comprising:
11 via a communications network, receiving at least a pair of non-
compressible packets having measurable characteristics;
12 calculating bandwidth based upon, measurable characteristics of at
least the pair of non-compressible packets; and
13 determining if the calculated bandwidth is *outside a given range of*
believability for calculated bandwidth,
14 if the calculated bandwidth is determined to be outside the given range
of believability:
15 *disregarding the calculated bandwidth; and*
16 *querying a modem of an entity about a bandwidth setting of the*
modem. (Emphasis added.)

17
18 Bharali teaches a method and system that is capable of determining current
19 network and bottleneck throughput. The patent describes the use of echo
20 messages and packets to achieve the stated goals of determining current network
21 and bottleneck throughput. Bharali indicates that packet types "are chosen to be
22 non-compressible." (See column 8, lines 13-14.) However, the patent's disclosure
23 does not expound on the use of non-compressible packets.

24 The Office concedes that Bharali does not teach or suggest various
25 limitations of independent claim 7. For example, Bharali does not teach or

1 suggest "determining if the calculated bandwidth is outside a given range of
2 believability for calculated bandwidth, if the calculated bandwidth is determined
3 to be outside the given range of believability: disregarding the calculated
4 bandwidth; and querying a modem of an entity about a bandwidth setting of the
5 modem." (See claim 7.)

6 The Office references Payne to address the deficiencies of the Bharali
7 patent. Applicant respectfully submits Payne does not cure the deficiencies of the
8 Bharali patent, for the following reasons.

9 Payne discloses a method and apparatus that monitors conditions of a signal
10 propagation path. The method and apparatus function with both wireless and
11 wired embodiments. Payne uses a connection monitor 40 that is capable of
12 consulting with a modem 36 to deduce or establish a reduced data transfer rate as
13 negotiated by a remote modem. (See column 8, lines 18-20.) Further disclosure
14 related to how the connection monitor 40 deduces or establishes "a reduced data
15 transfer rate as negotiated by a remote modem" is not provided in Payne.

16 The office maintains, on page 3 of the current Office Action, that the
17 foregoing disclosure of Payne "may experience/determine [if] the calculated
18 bandwidth is outside a given range of believability, then querying a modem of an
19 entity about a bandwidth setting of the modem," citing col. 8 of Payne. However,
20 this section of Payne merely mentions how a connection monitor may consult with
21 a modem to deduce or establish a reduced data transfer rate. The cited section
22 does not suggest any operation in which a calculated bandwidth is determined to
23 be "outside a given range of believability," as recited by claim 7.

24 The Office's argument is apparently that Payne consults a modem when
25 performance is "less than desirable", and that this is the same as determining

1 whether calculated bandwidth is within a "range of believability of calculated
2 bandwidth" However, this argument is without merit, since there is no teaching
3 by Payne that any particular performance evaluation is not "believable." Indeed,
4 the assumption in Payne is that "performance less than desirable" is entirely
5 believable, and that data transfer rates need to be adjusted as a result. In contrast,
6 as now recited in claim 7, the Applicant "*disregard[s]* the calculated bandwidth"
7 when it is deemed not believable. These are two quite different things.

8 Accordingly, even the combination of Bharali and Payne does not suggest
9 "determining if the calculated bandwidth is outside a given range of believability
10 for calculated bandwidth," and taking action based on that determination. Thus,
11 the rejection of claim 7 should be withdrawn.

12 **Claim 19** of the present Application, as amended, recites:

13 A method for measuring bandwidth between two entities on a
14 dynamic network, the method comprising:

15 via a dynamic network, sending at least a pair of non-compressible
16 packets, the dynamic network being a communications network having no
17 assurance that both packets of a pair of identical packets are handled in an
18 identical manner while in transit on the communications network;

19 *receiving a bandwidth value determined based upon measurements*
20 *related to at least the pair of non-compressible packets, and consideration*
21 *of a given range of believability related to calculated bandwidth;*

22 selecting a file formatted for a given bandwidth that is equal to or
23 less than the bandwidth value; and

24 sending the selected file via the dynamic network. (Emphasis added.)

25 As previously indicated in this Response, claims 19, 21-24, 27-29 and 44
stand rejected under 35 U.S.C. §103(a) as being unpatentable over Bharali in view
of Linzer. The teachings of Bharali are discussed in detail in connection with the
rejection of claim 7. For brevity, that discussion will not be repeated here.

1 Amended claim 19 recites "receiving a bandwidth value determined based
2 upon measurements related to at least the pair of non-compressible packets, and
3 consideration of a given range of believability related to calculated bandwidth."
4 (See claim 19.) The Office has conceded that Bharali does not teach or suggest
5 considering "a given range of believability" in relation to a bandwidth calculation.
6 (See current Office Action, page 3, 3rd full paragraph.)

7 Similar to the Bharali patent, Applicant respectfully submits that Linzer
8 fails to teach or suggest at least the indicated subject matter of claim 19. Linzer
9 teaches an apparatus and method that relate to compression of video signals. The
10 patent discloses that the same video signal may be compressed using encoding
11 techniques that have unique resolutions.

12 The apparatus and method relating to compression of video signals, as
13 taught by Linzer, do not have functional capability to determine how a bandwidth
14 value is determined. But the Linzer apparatus and method are not responsible for
15 determining the bandwidth. In all likelihood, the bandwidth of a given connection
16 is indicated by the provider of the connection. Alternatively, the bandwidth may
17 be simply assumed. Nonetheless, Linzer does not make any references or
18 assertions that relate to exactly how a received or assumed bandwidth value is
19 calculated and/or determined. Therefore, it cannot be fairly said that Linzer
20 teaches or suggests "receiving a bandwidth value determined based upon
21 measurements related to at least the pair of non-compressible packets, and
22 consideration of a given range of believability related to calculated bandwidth."
23 (See claim 19.)

24 Accordingly, even the combination of Bharali and Linzer does not suggest
25 "receiving a bandwidth value determined based upon measurements related to at

1 least the pair of non-compressible packets, and consideration of a given range of
2 believability related to calculated bandwidth." Thus, the rejection of **claim 19**
3 should be withdrawn.

4 The pending dependent claims are allowable at least due to their
5 dependence upon one of the allowable independent claims. Additional recitation
6 of these claims also sets forth novel subject matter.

7 As previously indicated in this Response, claim 20 stands rejected under 35
8 U.S.C. §103(a) as being unpatentable over Bharali and Linzer and further in view
9 of Takagi. The teachings of Bharali are discussed in detail in connection with the
10 rejection of **claim 7** and the teachings of Linzer are discuss in detail in connection
11 with the rejection of **claim 19**. For brevity, that discussion will not be repeated
12 here.

13 Takagi teaches a gateway device the apparently improves performance of
14 communications through the use of a transport layer connection setup between a
15 radio terminal of a radio network and a wire terminal of a wire network. There is
16 no teaching or suggestion that approaches "determining if the calculated
17 bandwidth is outside a given range of believability for calculated bandwidth, if the
18 calculated bandwidth is determined to be outside the given range of believability:
19 disregarding the calculated bandwidth; and querying a modem of an entity about a
20 bandwidth setting of the modem." (See **claim 7**.) Similarly, Takagi fails to teach
21 or suggest "receiving a bandwidth value determined based upon measurements
22 related to at least the pair of non-compressible packets, and consideration of a
23 given range of believability related to calculated bandwidth." (See **claim 19**.)

24 Accordingly, even if the Office were to consider the combination of
25 Bharali, Linzer and Takagi in relation to the subject matter of at least independent

1 claims 7 and 19, based on the discussion above, such a combination would not
2 render the claims unpatentable.

3 Based on the reasoning provided above, Applicant respectfully submits that
4 the patents to Bharali, Linzer and Takagi, whether taken alone or in combination
5 together, fail to teach or suggest the recitation of the pending claims. Accordingly,
6 reconsideration and withdrawal of the rejections under 35 U.S.C. §103(a) are
7 requested.

8
9 Additional claims 58-63

10 Claim 58 of the present Application recites:

11 A method, comprising:
12 via a communications network, receiving at least a pair of non-
13 compressible packets having measurable characteristics;
14 calculating bandwidth based upon, measurable characteristics of at
15 least the pair of non-compressible packets; and
16 determining if the calculated bandwidth is outside a given range of
17 believability for calculated bandwidth,
18 if the calculated bandwidth is determined to be outside the given
19 range of believability:
20 *setting a bandwidth to a low-believability threshold if the*
21 *calculated bandwidth is below the given range of believability for*
22 *calculated bandwidth; and*
23 *setting a bandwidth to a high-believability threshold if the*
24 *calculated bandwidth is above the given range of believability for*
25 *calculated bandwidth. (Emphasis added.)*

21 In the foregoing, each of the relied upon patents are discussed in detail. For
22 brevity, this discussion will not be repeated here. Nonetheless, based on that
23 discussion, Applicant respectfully submits that the patents relied upon, whether
24 taken alone or in combination together, fail to teach or suggest at least "if the
25 calculated bandwidth is determined to be outside the given range of believability:

1 setting a bandwidth to a low-believability threshold if the calculated bandwidth is
2 below the given range of believability for calculated bandwidth; and setting a
3 bandwidth to a high-believability threshold if the calculated bandwidth is above
4 the given range of believability for calculated bandwidth" as well. (See claim 58.)
5 Therefore, Applicant respectfully submits that additional claim 58 is allowable
6 over the art relied upon by the Office. The additional dependent claims are at least
7 allowable due to their dependence upon an allowable independent claim.
8 Additional recitation of these claims also sets forth novel subject matter.

9
10 Improper Rejections under 35 U.S.C. §103(a)

11 Applicant respectfully submits one of ordinary skill in the art would not be
12 motivated to combine the patents relied upon by the Office. Simply put, it appears
13 the Office has used hindsight reconstruction as a basis for attempting to substantiate
14 the current obviousness rejections. Hindsight reconstruction occurs when that which
15 is taught by the inventor is used against its teacher.

16 One example where the Office has used the technique described in the
17 foregoing is found in the rejection in view of Bharali and Payne. The Office states,
18 on page 4 of the current Office Action, certain elements of the Bharali patent "may
19 experience/determine [if] the calculated bandwidth is outside a given range of
20 believability, then querying a modem of an entity about a bandwidth setting of the
21 modem." The Office, on page 4 of the current Office Action, then uses
22 substantially the same language of the indicated quote as the motivation to
23 combine Bharali and Payne. It is no coincidence that the quoted text is neither
24 taught nor suggested in the Payne patent. But, the similar (not exact) text is found
25 and claimed in the disclosure and claims of the present Application. This is

1 evidence that the Office has used the inventors' own teachings against them – a
2 practice that is not permitted. The Office is requested to review the other
3 rejections of the current Office Action for similar deficiencies.

4 Therefore, for the above reasons as well, Applicant respectfully submits the
5 rejections under 35 U.S.C. § 103 should be withdrawn.

6
7 Conclusion

8 Claims 7-9, 19-24, 27-29, 55 and 57-63 are in condition for allowance.
9 Applicant respectfully requests reconsideration and issuance of the subject
10 application. Should any matter in this case remain unresolved, the undersigned
11 attorney respectfully requests a telephone conference with the Examiner to resolve
12 any such outstanding matter.

13
14 Respectfully Submitted,

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